

for enabling a feature corresponding to one of T1 and E1 transmission protocols and not conventionally used for transmitting the payload data, the method comprising employing the field for transmission of a portion of the payload data.

2. (Amended) The method of claim 1 further comprising:

receiving the payload data as a data stream with the first SDSL modem;

generating a sequence of data frames in the HDSL frame format with the first SDSL modem; and

transmitting the sequence of data frames to the second SDSL modem.

3. (Amended) The method of claim 2 wherein generating the sequence of data frames comprises:

taking the portion of the payload data from the data stream and storing the portion of the payload data in a register associated with the first SDSL modem, the register corresponding to the feature;

using the portion of the payload data in the register to generate the sequence of data frames, the portion of the payload data occupying the field in the payload block.

5. (Amended) The method of claim 1 further comprising:

receiving the payload data as a sequence of data frames in the HDSL frame format from the first SDSL modem with the second SDSL modem; and

decomposing the sequence of data frames into a data stream with the second SDSL modem.

6. (Amended) The method of claim 5 wherein decomposing the sequence of data frames comprises:

taking the portion of the payload data from the field in the payload blocks of the sequence of data frames and storing the portion of the payload data in a register associated with the second SDSL modem, the register corresponding to the feature;

inserting the portion of the payload data in the register into the data stream.

10. (Amended) The method of claim 1 wherein the field comprises an F/Z bit field.

11. (Amended) A single-line digital subscriber line (SDSL) modem for transmitting a sequence of data frames according to a standard high data rate digital subscriber line (HDSL) frame format, the frame format including a field in each payload block for enabling a feature corresponding to one of T1 and E1 transmission protocols and not conventionally used for transmitting the payload data, the modem comprising:

Sub E1
Circuit

framing circuitry for receiving an incoming data stream and generating the sequence of data frames, the framing circuitry employing the field for transmission of a portion of the payload data from the incoming data stream; and

modulation circuitry for modulating and transmitting the sequence of data frames.

12. (Amended) The modem of claim 11 further comprising a register associated with the framing circuitry and corresponding to the feature, the framing circuitry being operable to take the portion of the payload data from the data stream, store the portion of the payload data in the register, and insert the portion of the payload data in the register into the field in the payload blocks of the sequence of data frames.

CR3
Circuit

13. (Amended) The modem of claim 12 wherein the register comprises an F/Z bit register and the field comprises an F/Z bit field.

14. (Amended) A single-line digital subscriber line (SDSL) modem for receiving a sequence of data frames in a standard high data rate digital subscriber line (HDSL) frame format, the frame format including a field in each payload block for enabling a feature corresponding to one of T1 and E1 transmission protocols and not conventionally used for transmitting the payload data, the modem comprising:

demodulation circuitry for receiving and demodulating the sequence of data frames; and

framing circuitry for receiving the demodulated sequence of data frames and generating a data stream, the framing circuitry inserting a portion of the payload data stored in the field into the data stream.

15. (Amended) The modem of claim 14 further comprising a register associated with the framing circuitry and corresponding to the feature, the framing circuitry being operable to take the portion of the payload data from the field in the payload blocks of the sequence of data frames, store the portion of the payload data in the register, and insert the portion of the payload data in the register into the data stream.

16. (Amended) The modem of claim 15 wherein the register comprises an F/Z bit register and the field comprises an F/Z bit field.